

Finding a Narrative

Emotional Engagement	Central Image or Metaphor	Organizing Content into Story Form
<p><i>What is emotionally engaging about the topic? How is it meaningful? Why should it matter to us?</i></p> <p>The air is full of wonders with seemingly magical properties. If we could just change the scale of things or what the eyes can see, instead of empty, featureless, air, we would realize that the air is full of noises, waves and particles, smells, living things, and decayed flakes of skin.</p> <p><i>What binary concepts best capture the meaning and emotion of the topic? If this were a story, what would the opposing forces be?</i></p> <p>Empty/ full: empty connoting dull, uninteresting, or undifferentiated lack or absence of content; full connoting richness, variety, magical plentitude</p> <p>Alternative: illusion/ truth</p>	<p><i>What content most dramatically illustrates the contrast between the binary opposite? Is there a metaphor or image that can do this?</i></p> <p>A desk, made of wood, seems much more interesting than the air. In fact, however, a desk's composition is quite homogenous; the air, in contrast, is far more varied.</p>	<p><i>How can we organize the content into a developing story form?</i></p> <p>Using a radio, the teacher could demonstrate that radio waves are "in" the air, although we cannot see them: switch on a radio in one corner of the room and listen to the voices, then move to another part of the room, change the channel, and listen to music. Ask the students where the voices and music "come from." Clarify the suggestions and answers supplied.</p> <p>Ask how significant the walls of the room are to the "eye" of the radio; it can "see" through walls. Darken the room and shine a powerful flashlight on the dust particles in the room. Ask students if the dust particles are normally there. Why don't we "see" them? What are they? (60% of the dust in a typical classroom is made up of decayed flakes of human skin.) Ask students what else might be in the air that we can't immediately "see." How does smell "travel"? Where do flies defecate?</p> <p>Find ways to help the students form images of, and study, other entities that fill the air, such as microbial life, gases, subatomic particles from the sun and from outside our solar system, pollutants and pollens.</p> <p>Explore the history of the chunk of air currently in the air, from the earliest times to the present.</p>

Developing Cognitive Tools

The Bounty of the Air

Images and Metaphor	Rhythm, Rhyme and Patterns	Drama and Roleplay	Teacher-led/structured ↕ Student-led/open-ended
<p>What activities help students develop images, metaphors, other forms of creative depiction?</p> <p>Choose one property of the air, such as gas, and discuss how we would represent it if we were making an animated movie in which it was a character. What colour would it be? Why? Would its surface be smooth, bumpy, shiny, dull? What kind of sounds would gas make? Students can develop their own visual representations or metaphors for various properties. (In this example, gas might be a superhero, whizzing quickly by, with unexpected powers, able to expand and contract at great speed, etc).</p> <p>What jokes or fantastic stories can be found or invented that relate to the topic?</p> <p>Knock knock! Who's there? Air! Air who? Airen't you gonna ask how air can talk?</p>	<p>What activities help students experience and extend a sense of rhythm, rhyme or predictability?</p> <p>Does each type of property move at its own rate/have its own rhythm? Would a type of music, method of dancing/sense of rhythm correspond to each? (For example, dust might waltz and have a one two three rhythm, while fly feces might be a one two rock rhythm of thrasher music.)</p> <p>Students could write and present poems about their properties using their particular rhythms; this would probably require a lot of teacher assistance in brainstorming words with appropriate stress patterns such as happily, quietly, everywhere for dust. Students could also create movement pieces, dances or simple gestures to accompany the readings of the poems.</p>	<p>How can the students become characters in the story? How can they be encouraged and aided to contribute to or retell it using their own words, gestures, and actions?</p> <p>Have students write a play in which a villain is trying to destroy all the properties of the air. The play must contain these five essentials: dynamic characters, their relationships (e.g. are there "families" of properties?), setting, conflict, and a satisfying resolution to the conflict. The play must reveal characteristics/features of each property (e.g. dust could be lazy, heat quick to anger). Fairy tales might be used as fertile grounds for ideas. Remember that the play should be structured around "full/empty" binary (this is akin to alive/dead air or a teeming city versus a ghost town).</p> <p>Have students prepare soliloquies for each of their properties. Discuss voice, gestures, interests that each property might have (e.g. decaying flakes of skin might be personified as a very old, fragile man/woman who has brittle bones, a wispy voice full of sighs, long pauses and uncertainty, who talks a great deal about the "long lost relatives").</p> <p>If we could eavesdrop on the properties of the air, what kind of conversation would we hear?</p>	

Looking Forward and Concluding

The Bounty of the Air

Towards Further Understanding	Resolution	Assessment
<p><i>How can the unit develop embryonic forms of Romantic, Philosophic, Ironic understanding? What cognitive tools characteristic of literacy, the disciplines, or embodied self-awareness can be introduced here?</i></p> <p>How much “stuff” can a particular body of air hold under different circumstances (e.g. temperature changes)?</p> <p>Could we bottle and transport enough air so that we could inhabit another planet?</p> <p>How do vacuums work?</p> <p>Can physics explain the wonder of the air?</p>	<p><i>How does the story end? How are the opposites mediated or resolved?</i></p> <p>Change the perspective of the classroom for a final presentation by students on a “property” of the air (bacteria, dust, gases, pollutants). Each group could present its property by explaining and modeling its features. When all groups have presented, have the first group animate its property (the dust starts meandering), followed by the second group (the gases start bouncing), etc. Finally, all of the properties are filling the entire classroom. (Be sure to alert students of the importance of avoiding collisions! A good way to increase awareness of personal space is to suggest that they “seek out the empty spaces.”) If collisions do occur, what happens to the properties?</p> <p>Alternately, ask students to sit still, close their eyes and imagine themselves shrinking and shrinking, like Alice in Wonderland. When they have become as small as a mote, the teacher can describe the senses that will allow them to “see” and feel the air in their classroom quite differently. Either the teacher can prepare a “guided discovery” tour around the huge viruses and bacteria, the swirling winds that carry the dust around, the particles flashing by, the waves of radiation from light sources, fly feces, heat from bodies, radio waves, etc, or, alternatively, the children can describe what they “see” after some preparation and rehearsal.</p>	<p><i>How can one know whether the topic has been understood, its importance grasped and the content learned?</i></p> <p>Was the child affectively engaged in the unit?</p> <p>Was his or her imagination engaged?</p> <p>Was the child committed to the project?</p> <p>How much continuous time did the child spend engaged in the project?</p> <p>Did questions posed and comments made reveal interest/understanding?</p> <p>Did written, oral and pictorial presentations show competence and confidence?</p> <p>Were the images used in written, oral and pictorial presentations vivid, original and relevant?</p> <p>Did the child contribute and cooperate in (some/most/all) parts of the project/unit?</p> <p>Does the child demonstrate knowledge of properties of the air?</p>